



Doosan Infracore
Machine Tools

PUMA TT 2000 / 2500

Multi-Axis Turning Center



Multi-axis turning center combines Y-axis function, two spindles and upper & lower turret in a machine

High performance turning center featuring first & second spindle that have the same power and capacity, with upper & lower turrets on the grounded box type bed. Simultaneous machining on two faces with both spindles and turrets and virtual realization of Y-axis function will bring you double productivity.

PUMA TT 2000 / 2500





Main Spindle

Left Spindle

C1-axis

Right Spindle

C2-axis

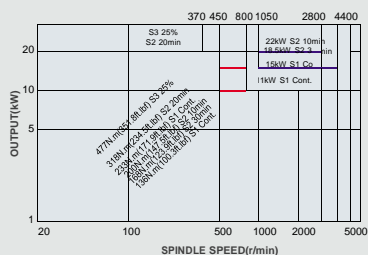
Perfect built-in motor driven spindles.

Both Left and Right spindle are designed to minimize maleffects of thermal distortion which can hit continuous machining precision seriously. Especially the same capacity of both spindles improves productivity remarkably of single machine.

Main Spindle power-torque diagram

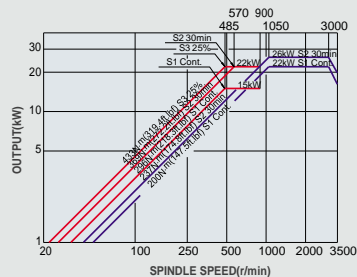
PUMA TT 2000 SY

Spindle motor power : 22kW(Built-in)
Max. Spindle speed : 5000 r/min



PUMA TT 2500 MS/SY

Spindle motor power : 26kW(Built-in)
Max. Spindle speed : 3500 r/min



PUMA TT2000SY

Max. spindle speed Motor (10 min)

5000 r/min

22 kW

PUMA TT2500MS/SY

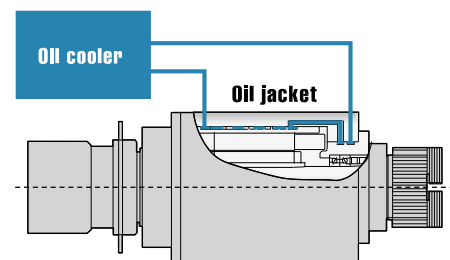
Max. spindle speed Motor (30 min)

3500 r/min

26 kW

Oil Cooling Unit for Spindles

Both left and right spindle have built-in motor spindles that wholly covered with oil cooling system to ensure remarkable range of applications from heavy duty cutting with high power at low speed to fine to finish cutting at high speed and optimize thermal displacement.



Perfect C-axis Control of Both Spindles

C1, C2-axis index

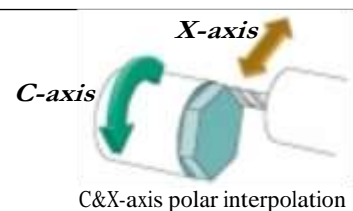
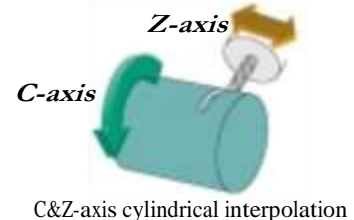
360 (in 0.001 increment)

C1, C2-axis braking torque

1103 N·m

C1, C2-axis contouring torque

366 N·m



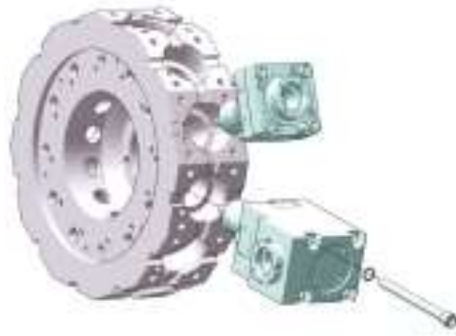
Turret



Total of 24 tool stations upper and lower turret(BMT65P) make it possible to complete complicated parts requiring many tools in just one set-up. Reliable servo driven turrets reduce the total cycle time required to machine parts.

Harmonization of upper & lower turret

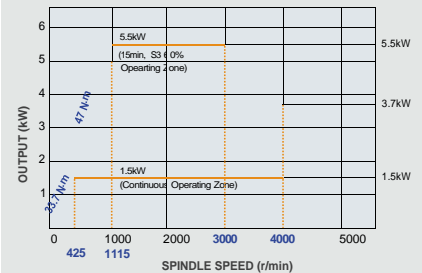
Radial BMT65P



The turret features BMT65P style tooling in which the toolholders are mounted directly to the turret's periphery using 4 large bolts.

Rotary tool spindle power-torque diagram

Max. speed : 4000 r/min (5.5 kW)



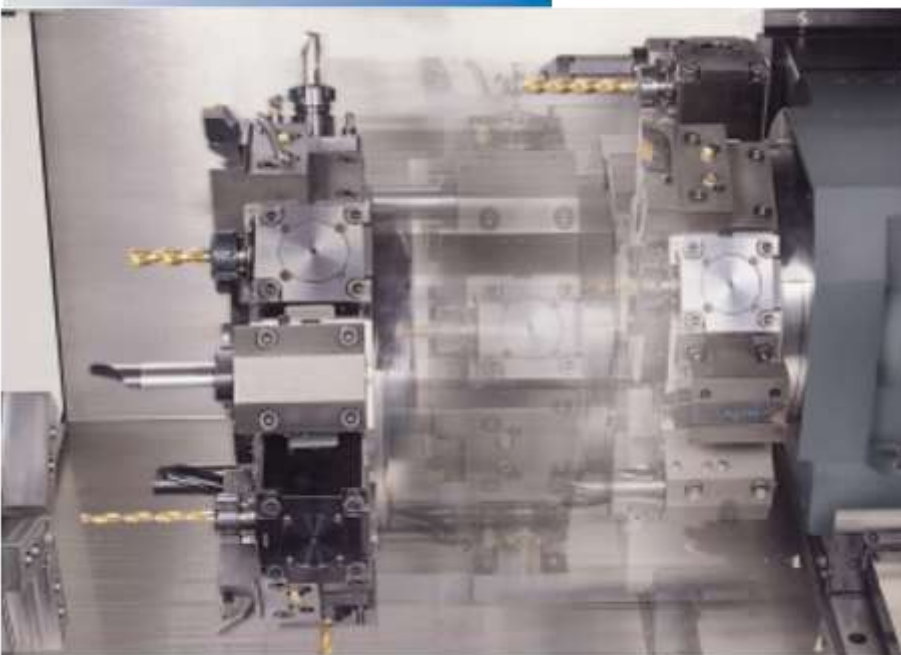
Index time
(1-station swivel)

0.20 s

No. of tool station
(Upper+Lower turret)

24 stations (12+12)

Rapid Traverse



Outstanding rigidity for high feedrates



Scraping of Slideway

X-axis **20 m/min** Z-axis **24 m/min**

Robust Design

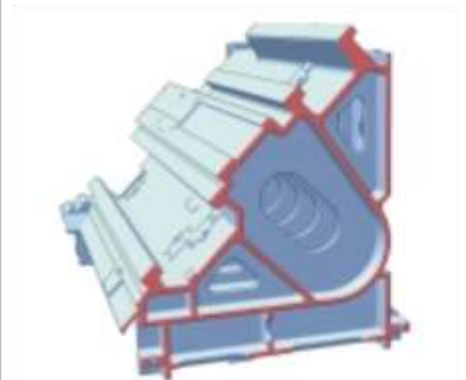
Stable base for supporting high-speed, high-precision machining.



All guide ways are wide wraparound rectangular type for unsurpassed long term rigidity and accuracy



FEM (Finite Element Method)



The heavily ribbed torque tube design prevents twisting and deformation.

Virtual y-Axis Function

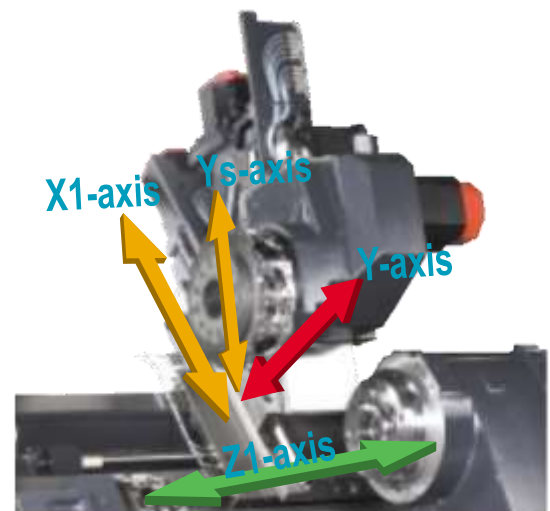
Y-axis addition to upper turret on SY series brings complex machining to completion in just one set-up. Synchronous interpolation of X1-axis and Ys-axis in double ways structure creates the Y-axis function

Y-axis travel

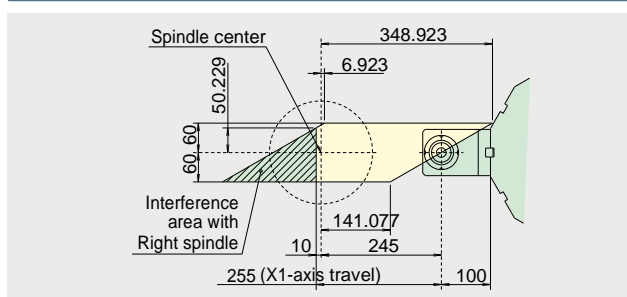
120 mm (60mm)

Y-axis rapid

7.5 m/min



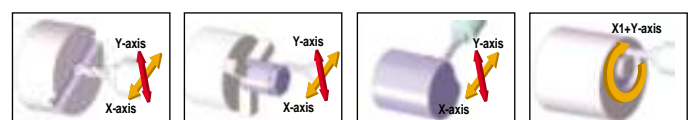
Y-axis Working Range



Angular milling unit moving area

Y-axis Working Range

By simultaneous X-Y-Z-axis feed control and C-axis function to guide precise circular orientation of spindle, Y/X axes circular interpolation simplifies the machining of complex shapes in faster cycle time.



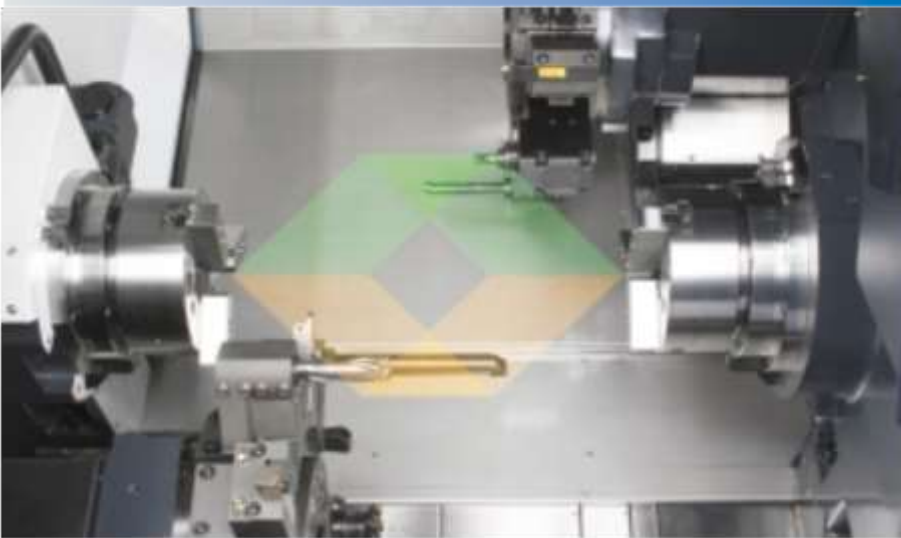
On-center face groove

Poly-side machine

Off-center side groove

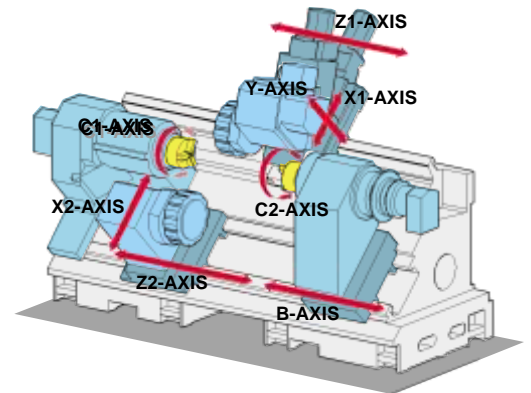
Y&X-axis circular interpolation

Machine Construction



Perfect integration of multi-process and high productivity are achieved by Left & right spindle of the same power and capacity, with upper & lower turrets on the grounded box type bed.

Process integration by just one setup



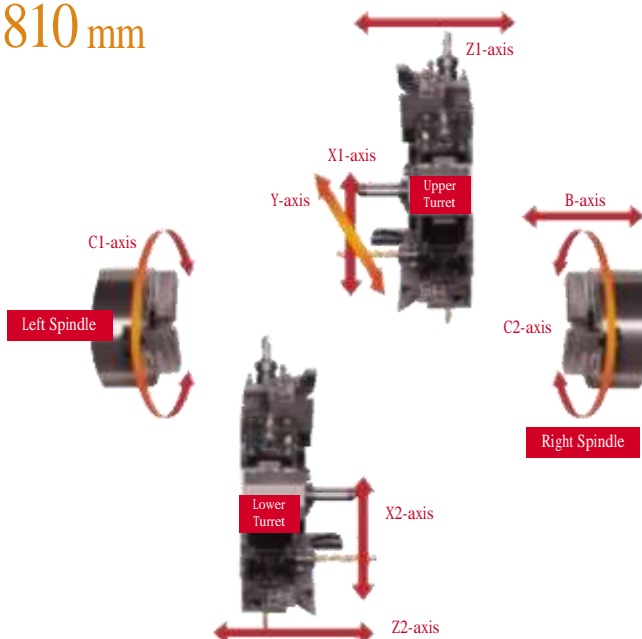
Continuous process accuracy,
Shorten setting time,
Optimal distribution of cycle and
Automated works

Achievement of
PUMA TT machines

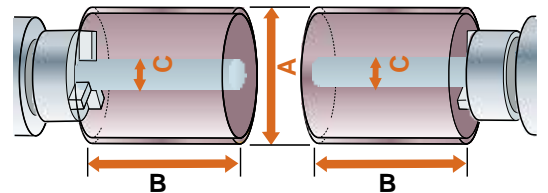
Axis Features

Travel

X1axis (Upper turret)	Z1axis (Upper turret)
255 mm	800 mm
X2-axis (Lower turret)	Z2-axis (Lower turret)
190 mm	900 mm
B-axis	
810 mm	



Machining Range



A : Max. turning dia. 390 mm
(on Upper turret)

300 mm
(on Lower turret)

B : Max. turning length 350 mm

C : Max. bar working dia. 76 (67)^{*1} mm

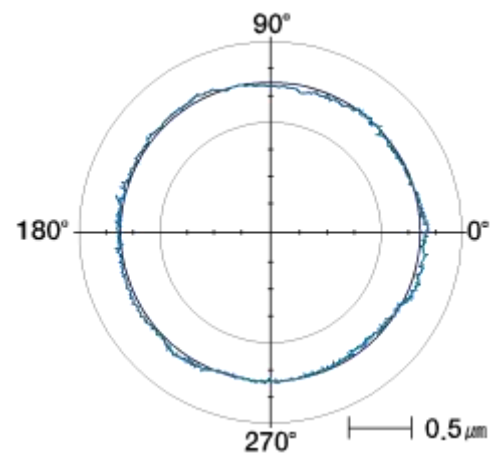
*1 : TT2000SY

Reliable Long-Run Machining Accuracy



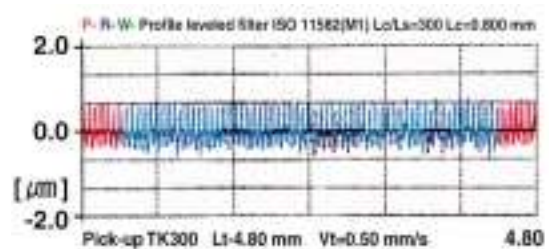
Roundness

0.45



Roughness

0.23 Ra



Tool	Diamond Tool [nose R0.8]
Material	AL2024
Outer diameter (mm)	60
Spindle speed (r/min)	1300
Feedrate (mm/rev)	0.05

The machining accuracy indicated is just for reference. Depending on cutting and environmental conditions during measurement, the results can be different.

Machine Capacity*1

Stable performance in all machining range.

Heavy-Duty Cutting, OD (Left spindle & upper turret)

Making full use of the high output motor, heavy-duty O.D. cutting is powerful and precise even with large workpieces.



Chip removal rate
348 cm³/min

Cutting depth
10 mm

Material	Carbon steel, SM45C
Cutting speed (m/min)	120
Feedrate (mm/rev)	0.36
Spindle speed (r/min)	320

Balanced Cutting, OD (Left spindle & upper - lower turret)

The synchronous control of Upper and Lower turrets makes O.D. cutting with high precision balanced cutting.



Chip removal rate
367 cm³/min

Cutting depth
(upper & lower turret)
5 mm 2

Material	Carbon steel, SM45C
Cutting speed (m/min)	120
Feedrate (mm/rev)	0.4
Spindle speed (r/min)	320

Drilling



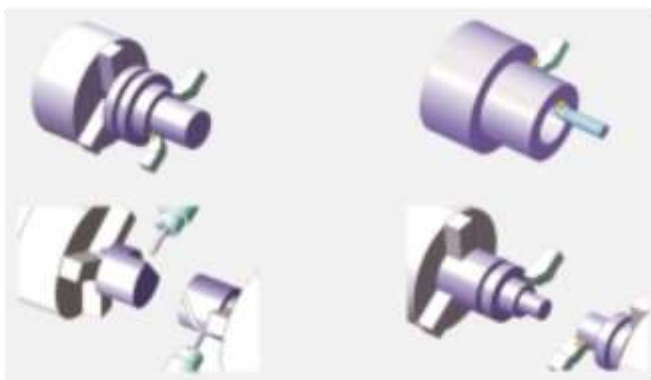
Tool	φ20 HSS drill
Material	Carbon steel SM45C
Rotary tool spindle speed (r/min)	1000
Feedrate (mm/rev)	0.3
Chip removal rate (cm ³ /min)	60
Drilling depth (mm)	10

Tapping

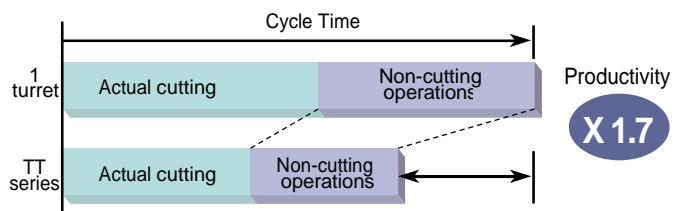


Tool	M16 2.0
Material	Carbon steel SM45C
Rotary tool spindle speed (r/min)	600
Feedrate (mm/min)	1200

Machining Examples



High Productivity



Note) The cutting test results indicated above are obtained as an example through real test cutting. The results may not be obtained due to differences in cutting and environmental conditions during measurement.

*1 : on TT2500MS

Ergonomic Design

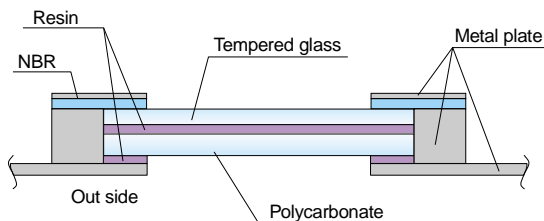
Carefully tailored ergonomic operating environment.

Safety & Operability

Safety window on front door

Viewing window is designed and was tested under heavy condition to protect operator against possible dangers during real cutting thanks to its shock absorbing laminated glass and double panel construction.

The window without grating also provides a clear view of the machine inside.



Swivel type operator panel

Operator oriented design with 90° swivel



High maintainability

Pressure control for Left spindle chucking

Pressure control for Right spindle chucking (or Tail stock)



Eco-Friendly Design

Perfect integration to care environment of human and earth

Collection of Waste Lubrication Oil

Less waste lubrication oil extends the life time of the coolant water and cut down the grime and offensive smell of the machine inside.

No Coolant Leakage

Rigorously designed, manufactured and tested machine covers do not permit coolant leakage in any condition. The factory always keeps our environment clean.

Oil Skimmer (opt.)

Another suggestion to prolong the life time of the coolant water. A belt-driven type oil skimmer picks up and removes waste oil from the coolant tank that is easily drained.



Optional Equipments



Collet chuck



Auto tool pre-setter



Oil skimmer



Coolant blower



Work measurement



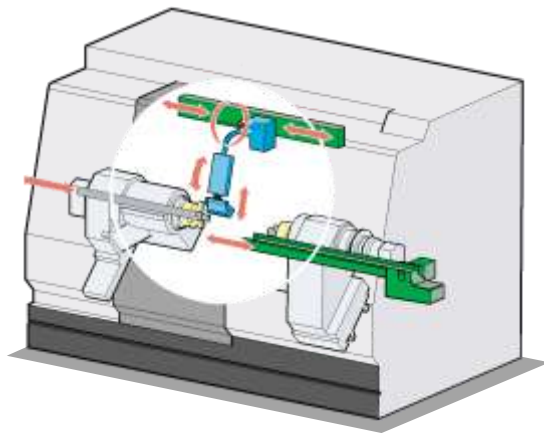
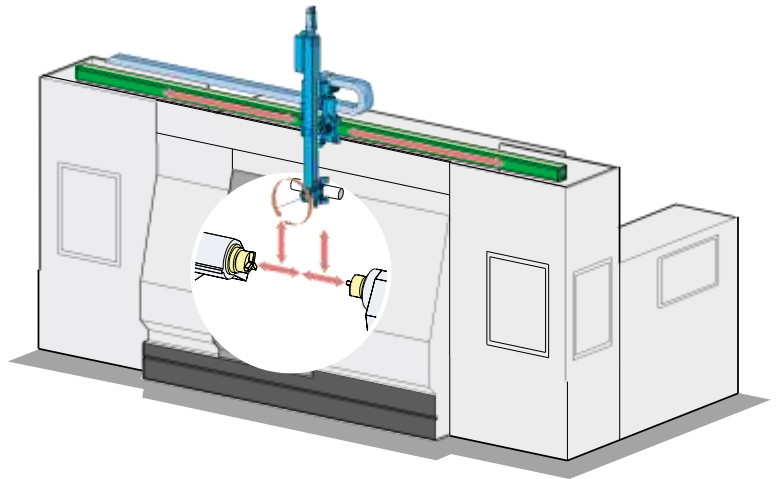
Oil mist collector

Optimal Support System of Automatic Operation (option)

Gantry Loader Application

TT series can be integrated perfectly with a high-speed gantry loader to increase productivity in both short and long production runs.

Max. work diameter	255mm
Max. work length	160mm
Max. work weight	15kg
Max. speed of X-axis	90m/min
Max. speed of Z-axis	100m/min
Number of pallets	14 stations
Stack height	450mm



Parts Unloader & Conveyor

Parts unloader system built inside the machine can receive workpieces from both spindles. Automated operation is realized perfectly when the system is coupled with bar feeder system.

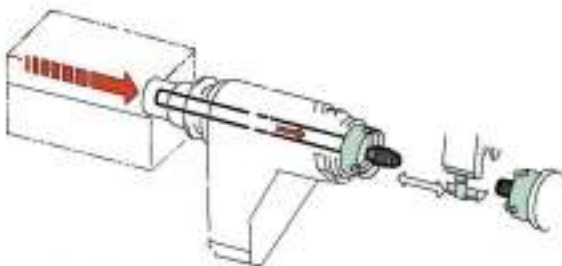
Max. work diameter	76mm
Max. work length	170mm
Max. work weight	4kg

Bar Feeder System

Automated bar working is possible by bar feeder system. When parts unloader system is added, its value of use will be in the best.

Max. Bar Working dia

76 (67)^{*1}mm



*1: on TT2000SY.

Note) Depending on the chuck and cylinder spec. used in the machine, the bar working dia. can be reduced.

Easy Operating System



Easy operating system has designed operation the many different machine in our products. We has supplied ease operation and high reliability with user-friendly interface to customer production lines.

Easy operation system

One single screen provides handy operation guidance for programming through machine operation.



For machining center, turning center and compound machine with milling and turning.

Solid modeling provides high speed animation. (TFT-LCD Color Only)

Icon menu soft-keys provide convenient programming for sophisticated milling and turning.

Measurement cycles provide automatic offset measurement of workpiece (Available for machining center and for compound machine).

Standard Features

High compact CNC is realized through LCD display with integrated CNC and a flash memory card interface is standard features.

Provides many support functions for set-ups, such as tool measurement, workpiece measurement at the original point, and workpiece measurement inside the machine.

Uses one display screen to perform all operations including programming, checking by animation, and real machining.

User-Friendly Operation : Soft key Selection of Comprehensive Cycle Library

Guide for machining preparation

In preparation for machining, simple instructions on a selected screen allow to measure the setting error of workpiece and tool offset value for automated adjustment.



Machining condition selecting function

One single screen provides convenient operation & parameter setting for high speed and high precision machining instructions.



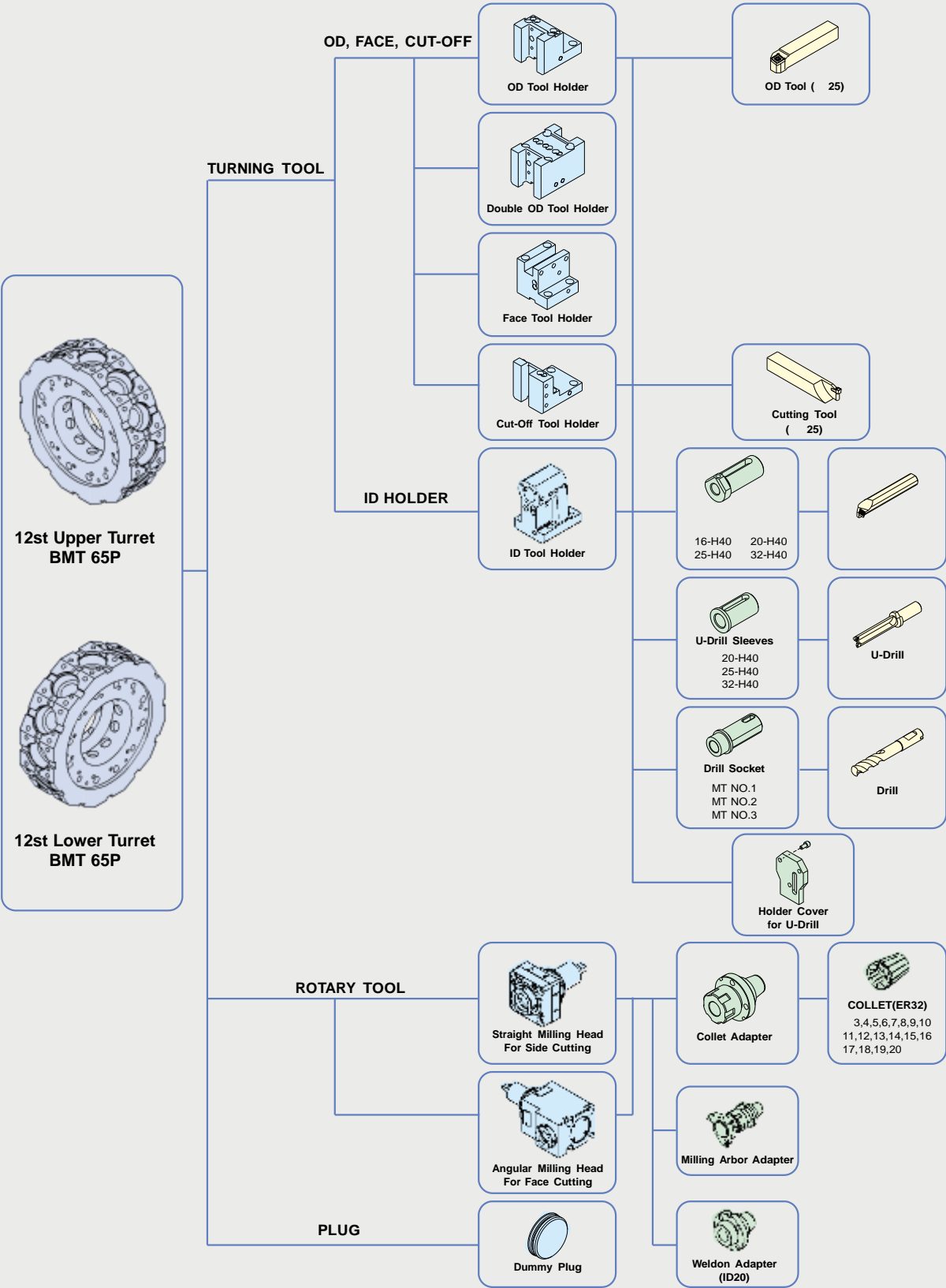
Registration of parameter sets for high speed machining and/or for high precision machining with machine configurations.

Instruction of precision level for desired machining selects appropriate parameters automatically.

Precision level can be instructed through NC program.

Tooling System (Upper & Lower turret)

unit : mm



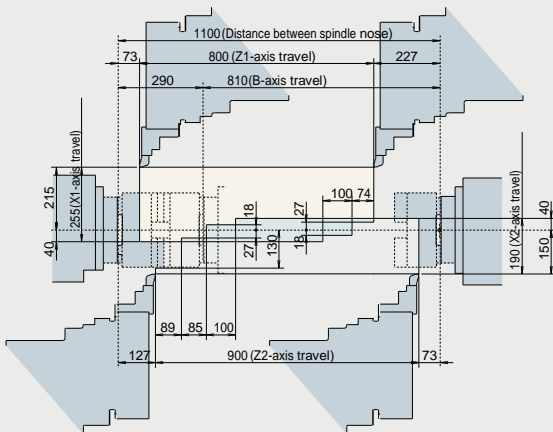
Note) Above tooling system is our recommendation. Depending on export condition, the standard tooling packed with the machine can be different.

Working Range

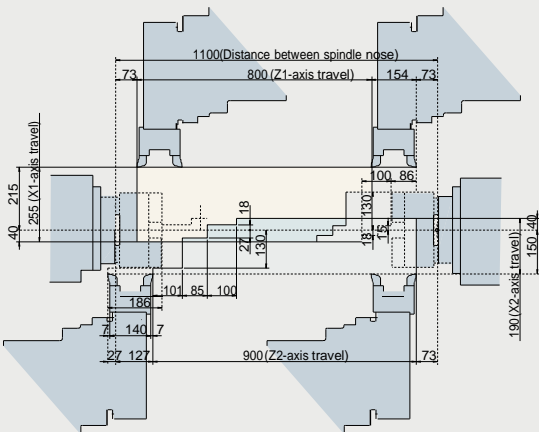
PUMA TT 2000SY/2500 MS/2500SY

unit : mm

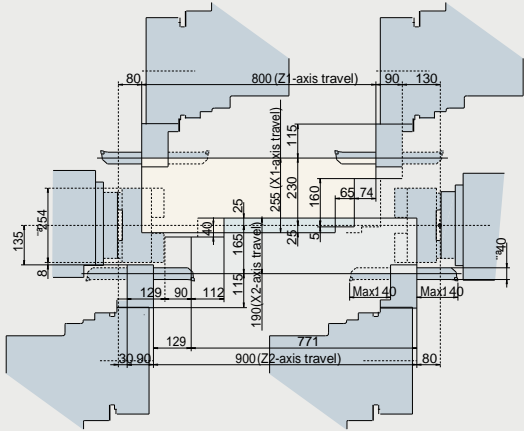
Single OD Tool holder



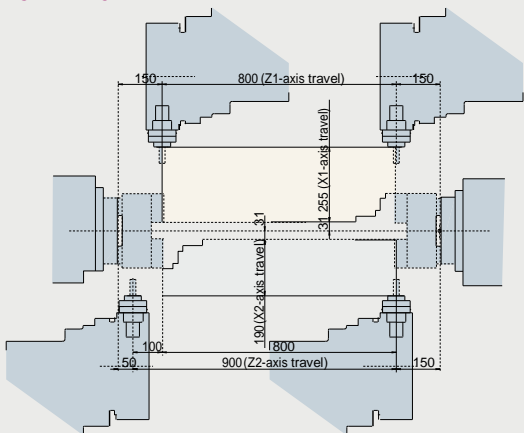
Double OD Tool holder



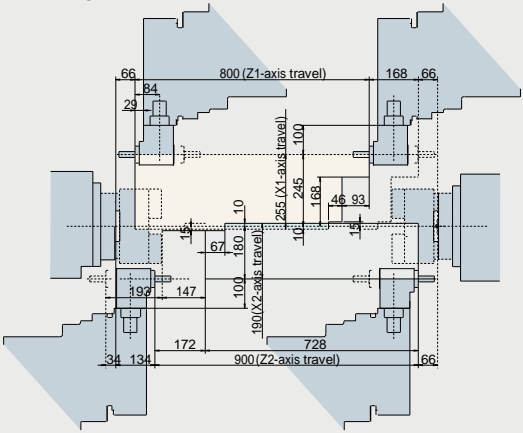
ID Tool holder



Straight milling head



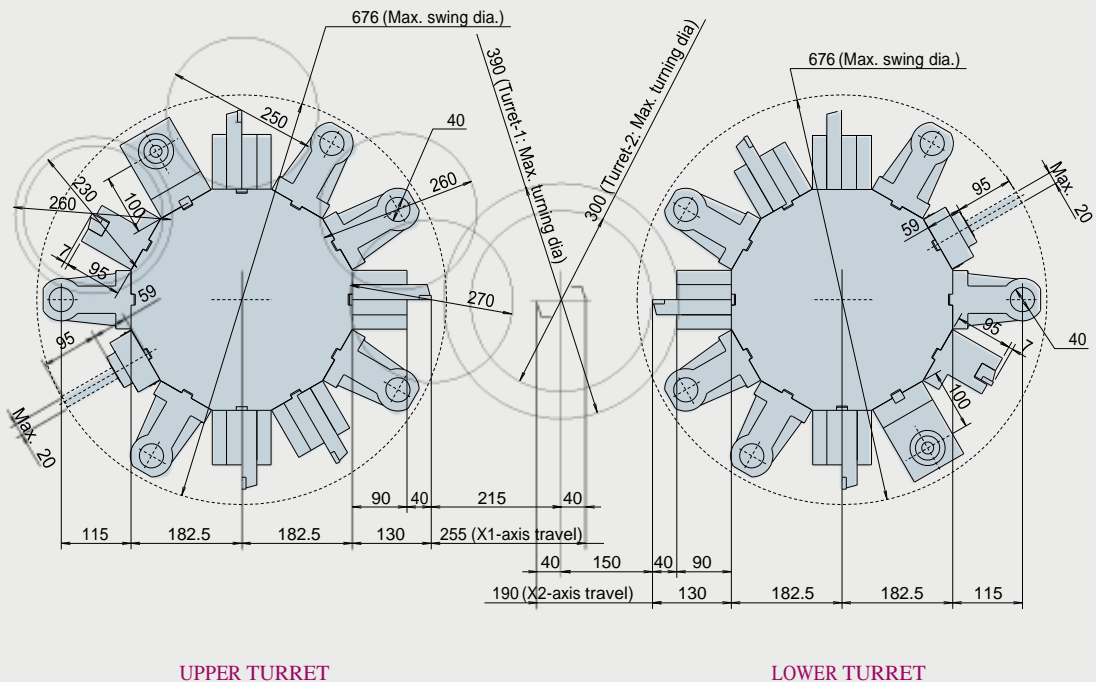
Angular milling head



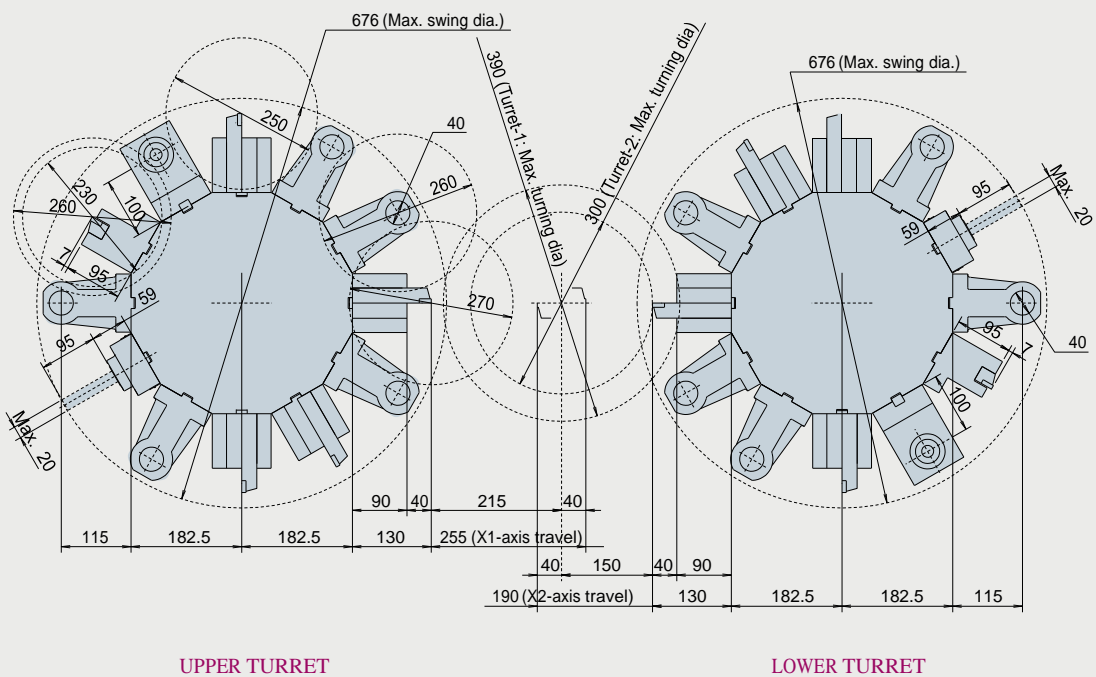
Tool Interference Diagram

PUMA TT 2000SY

unit : mm



PUMA TT 2500MS PUMA TT 2500SY

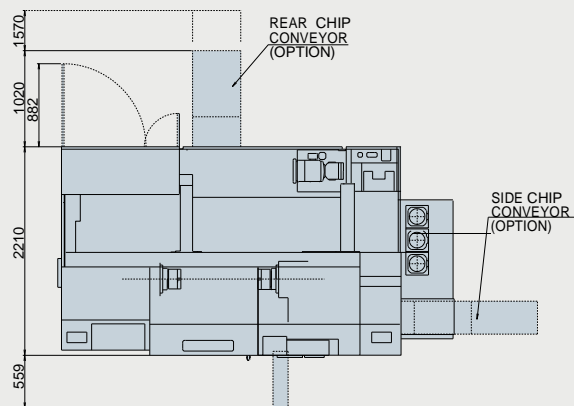


External Dimensions

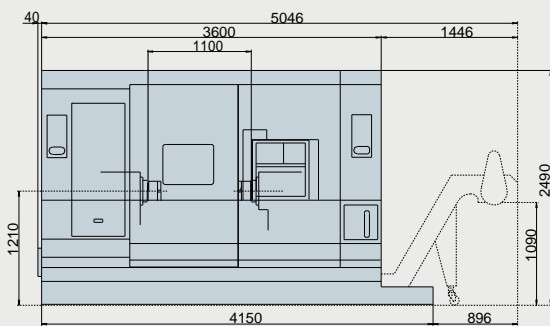
unit : mm

PUMA TT 2000SY

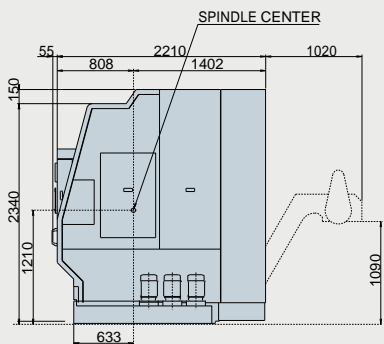
Top View



Front View

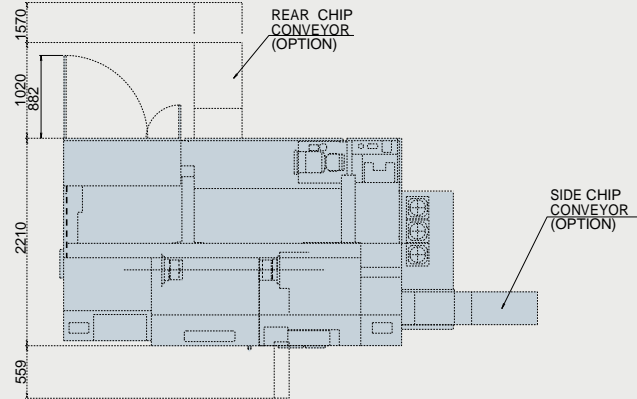


Side View

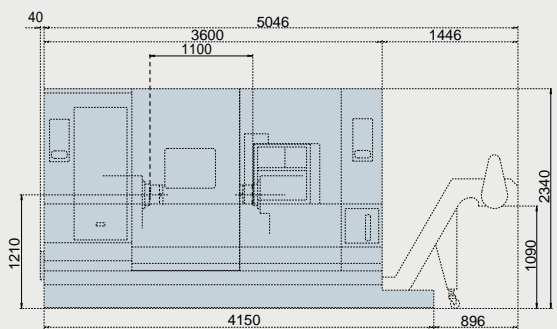


PUMA TT 2500MS

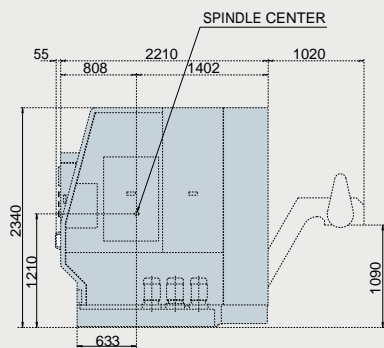
Top View



Front View



Side View



Machine Specifications

	Description	Unit	PUMA TT2000	PUMA TT2500MS	PUMA TT2500SY
Capacity	Swing over bed	mm		800	
	Swing over saddle	mm		620	
	Recom. Turning diameter	mm	210		255
	Max. Turning diameter	mm		U Turret : 390 L Turret : 300	
Left Spindle	Max. Turning length	mm		350	
	Bar working diameter	mm	ø 65		ø 76
	Spindle speed	r/min	5000		3500
	Spindle nose	ASA	A2#6		A2#8
Right Spindle	Spindle bearing diameter (Front)	mm	110		130
	Spindle through hole	mm	ø 76		ø 90
	Cs Spindle Index angle	deg		360 (in 0.001)	
	Cs Spindle Index Speed	r/min		200	
	Spindle speed	r/min	5000		3500
	Spindle nose	ASA	A2#6		A2#8
	Spindle bearing diameter (Front)	mm	110		130
	Spindle through hole	mm	ø 76		ø 90
	Cs Spindle Index angle	deg		360 (in 0.001)	
	Cs Spindle Index Speed	r/min		200	
Carriage	Travel distance	X1/2-axis mm		X1: 255 <215+40> X2: 190 <150+40>	
		Z1/2-axis mm		Z1: 800, Z2: 900	
		B-axis mm		810	
	Rapid traverse	Y-axis mm	120 < 60 >	-	120 < 60 >
		Z1/2-axis m/min		24	
		B-axis m/min		24	
		Y-axis m/min	7.5	-	7.5
	Max. cutting feedrate	X1/2-axis mm/rev		500	
		Z1/2-axis mm/rev		500	
		B-axis mm/rev		500	
Turret		Y-axis mm/rev	500	-	500
	No. of tool stations (Upper+Lower)	st		12+12	
	OD tool height	mm		25	
	Boring bar diameter (Main/Sub)	mm		ø 40	
Motor	Indexing time	s		0.2	
	Rotary tool spindle speed	r/min		4000	
	Left spindle motor (Int./Cont)	kW	22/15 (10min)		26/22 (30min)
	Right spindle motor (Int./Cont)	kW	22/15 (10min)		26/22 (30min)
	Rotary tool spindle motor (15min /Cont)	kW		5.5/1.5	
	Servo motor	X1-axis kW	4.0	3.0	4.0
		X2-axis kW		3.0	
		Z1-axis kW		4.0	
		Z2-axis kW		4.0	
		B-axis kW		4.0	
Other		Y-axis kW	3.0	-	3.0
	Coolant pump	kW		0.9	
	Electric power supply (Rated capacity)	kVA	83.15	95.6	95.77
	Machine height	mm	2480	2330	2480
	Machine dimensions	length mm		4050	
		width mm		2210	
	Machine weight	kg	12600	12300	12700

Standard Feature

Absolute positioning encoder	Hand tool kit (including small tool for operations)	Safety precaution name plates
Air blast for chuck jaw cleaning	Hyd. chuck & actuating cylinder	Soft jaws (total)
Coolant supply equipment	Hydraulic power unit	Spindle oil cooling unit
Foot switch	Leveling jack screw & plates	Standard tool kit (tool holder & boring sleeve)
Front guard door inter lock	Lubrication equipment	Work light
Full enclosure chip and coolant shield	Manuals	

Optional Feature

Air gun	Chip bucket	Proximity switches for chuck clamp detection
Automatic door	Collet chucks*	Pressure switch for chucking pressure check
Automatic door with safety device	Coolant blower	Parts unloader and conveyor
Automatic power off	Dual chucking pressure	Signal tower (yellow, red, green)
Automatic measuring system*(in process touch probe)	Hardened & ground jaws	Special chucks
Bar feeder interface	High pressure coolant pump	Tool monitoring system
Bar puller	Minimum Quantity Lubrication (MQL)system	Tool pre-setter (hydraulic type)
Chip conveyor	Oil skimmer	

Note) *: It should be reviewed in detail before contract.

Design and specifications are subject to change without prior notice.

Doosan is not responsible for difference between the information in the catalogue and the actual machine.

NC Unit Specifications(Fanuc 18i-TB)

AXES CONTROL	
- Controlled path	2 path
- Controlled axes	
- T12000SY : 8 AXES, T12500MS : 7 AXES, T12500SY : 8AXES	
- Simultaneous controlled axes	4 axes
- Angular axis control	
- Axis control by PMC	
- Arbitrary angular axis control	
- Backlash compensation	0 ~ 9999 pulses
- Backlash compensation for each rapid traverse and cutting feed	
- Chamfering on/off	
- Controlled axes expansion (total)	Max.8 [4+4] axes
- Cs contouring control	
- Emergency stop	
- Fine Acc & Dec control	
- Follow-up	
- High speed HRV control	
- HRV control	
- Inch / Metric conversion	
- Interference check for rotary area	
- Interlock	All axis / each axis
- Least input command	0.001 / 0.0001 mm/inch
- Machine lock	All axis / each axis
- Mirror image	
- Overtravel	
- Position switch	
- Servo off	
- Simultaneous controlled axes expansion (total)	Max.4 axes
- Stored pitch error compensation	
- Stored stroke check 1	
- Unexpected disturbance torque detection function	
OPERATION	
- Automatic operation (memory)	
- Buffer register	
- Dry run	
- Handle incremental feed	X1, X10, X100
- JOG feed	
- Manual handle feed	1 unit
- Manual intervention and return	
- Manual pulse generator	1 ea
- Manual reference position return	
- MDI operation	
- Program number search	
- Program restart	
- Sequence number search	
- Single block	
INTERPOLATION FUNCTIONS	
- 1st. reference position return	Manual, G28
- 2nd. reference position return	G30
- Balance cutting (Only for 2 path)	
- Circular interpolation	G02
- Continuous threading	
- Cylindrical interpolation	
- Dwell (per sec)	G04
- Helical interpolation (Only with Y)	
- Linear interpolation	G01
- Multiple threading	
- Polar coordinate interpolation	
- Polygon turning	
- Positioning	G00
- Reference position return check	G27
- Skip	G31
- Superimposed control	
- Synchro / composite control	
- Thread cutting / Synchronous cutting	
- Thread cutting retract	
- Torque limit skip	
FEED FUNCTION	
- Automatic acceleration / deceleration	
- Cutting feedrate clamp	
- Feed per minute	
- Feed per revolution	
- Feedrate override (10% unit)	0 - 200 %
- Jog feed override (10% unit)	0 - 2000 mm/min
- Manual per revolution feed	
- Override cancel	
- Rapid traverse override	F0, 25, 100 %
- Rapid reverse rate	
- Tangential speed constant control	
AUXILIARY / SPINDLE SPEED FUNCTION	
- 1st spindle orientation	
- Actual spindle speed output	
- Auxiliary function lock	
- Constant surface speed control	
- M - code function	M3 digits
- Multi spindle control	
- Rapid tapping	
- S - code function	S4 / S5 digits
- Spindle serial output	S4 / S5 digits
- Spindle speed override	0 - 150 %
- Spindle synchronous control	
PROGRAM INPUT	
- Absolute/incremental programming	
- Addition of custom macro common variables	#100~#199, #500~#999
- Automatic coordinate system setting	
- Canned cycle for drilling	
- Canned cycle for turning	
- Circular interpolation by R programming	
- Control in/out	
- Coordinate system setting	G50
- Coordinate system shift	
- Custom macro B	
- Decimal point programming	
- pocket calculator type decimal point programming	
- Diameter/radius programming (X axis)	
- Direct drawing dimension programming	
- Direct input of coordinate system shift	
- G code system A	
- G code system B/C	
- Input unit 10 time multiply	
- Label skip	
- Macro executor	
- Manual absolute on and off	
- Maximum program dimension	8 digit
- Multiple repetitive canned cycle	G70 - G76
- Multiple repetitive canned cycle	
- Optional block skip	1 piece
- Optional block skip (with out hardware)	9 piece
- Parity check	
- Plane selection	G17,G18,G19

- Program number	O4 digit
- Program stop / end (M00, M01 / M02, M30)	
- Programmable data input (G10)	
- Sequence number	N5 digit
- SUB program call	4 folds nested
- Tape code : ISO / EIA auto recognition	EIA RS422/ISO840
- Tape format for FANUC Series15	
- Work coordinate system	G52 - G59
TOOL FUNCTION / TOOL COMPENSATION	
- Automatic tool offset	
- Direct input of offset value measured	
- Direct input of offset value measured B	
- T - code function	T2 2 digits
- Tool geometry / wear compensation	
- Tool life management	
- Tool nose radius compensation	
- Tool offset	G43, G44, G49
- Tool offset pairs (T12000/2500 series)	64 pairs
- Tool offset pairs (T1500/1800 series)	64 pairs
- Tool offset value counter input	
- Y-axis offset (T1 SY type machine)	
EDITING OPERATION	
- Back ground editing	
- Extended part program editing	
- Number of registered programs	125 ea
- Part program editing	
- Part program storage length *1	640 m
- Program protect	
SETTING AND DISPLAY	
- Actual cutting feedrate display	
- Alarm display	
- Alarm history display	
- Current position display	
- Directory display and punch for each	
- Display of spindle speed and T code at all screens	
- External message display	
- Help function	
- Lock function	
- Multi-language display	english
- Operation history display	
- Parameter setting and display	
- Program name display	31 characters
- Run hours / parts count display	
- Self-diagnosis function	
- Servo setting screen	
- Spindle setting screen	
- Status display	
- Tool path graphic display	
DATA INPUT/OUTPUT	
- External key input	
- External program input	
- External work number search	15 points
- Memory card input/output	
- Reader/puncher interface	CHI interface
- RS232C interface	
OTHERS	
- Cycle start and lamp	
- Display unit	10.4" Color LCD
- Feed hold and lamp	
- MDI unit	for 10.4" LCD
- NC and servo ready	
- PMC system	PMC-SB7
- Reset / rewind	
- Reset / rewind	
INTERFACE FUNCTION	
- Ethernet function	Embedded ethernet
OPERATION GUIDANCE FUNCTION	
- EZ Guide (Conversational Programming Solution)	
OPTIONAL SPECIFICATIONS	
AXIS CONTROL	
- Chuck and tail stock barrier	
- Stored stroke 2 and 3	
- Stroke limit check before move	
OPERATION	
- DNC operation (Reader/puncher interface is required)	
- Manual handle feed	2 units
- Manual handle interruption	
- Reference position shift	
- Tool retract and recover	
INTERPOLATION FUNCTIONS	
- 3rd / 4th reference point return	
- Circular threading	
- Multi step skip	
- Variable lead threading	
FEED FUNCTION	
- Advanced preview control	
- External deceleration	
- Feed forward function	
- Feed stop	
PROGRAM INPUT	
- Automatic corner override	
- Coordinate system rotation	
- Interruption type custom macro	
- Optional block skip (with hardware)	9 piece
- Pattern data input	
- Work coordinate system preset	
TOOL FUNCTION / TOOL COMPENSATION	
- Addition of tool pairs for tool life management	128 pairs
- Tool monitoring system	
- Tool offset pairs (T12000/2500 series)	99 / 400 / 999 pairs
- Tool offset pairs (T1500/1800 series)	99 / 400 / 999 pairs
EDITING OPERATION	
- Number of registered programs	200 / 400 / 1000 ea
- Part program storage length *1	1280 / 2560 / 5120 m
- Play back	
SETTING AND DISPLAY	
- Directory display of floppy cassette	
DATA INPUT/OUTPUT	
- Data server	Only for 1 path
- DNC1 control	
- Remote buffer	Only for 1 path
CONVERSATIONAL PROGRAMMING FUNCTION	
- Symbol CAP-IT	*1) - Sub cycle function - Automatic process determination
- Animated simulation function	- C-axis FAPT function
- Y-axis FAPT function	- Back machining function
- Conversational screen display language change over	
ROBOT INTERFACE	
- Robot interface with PMC I/O module (Hardware between PMC I/O modules)	
- Robot interface with PRO-BUS-DP	

*1: The standard part program storage length is available 80m, if end-user chooses "Tool monitoring system" as optional specifications.

*1) Function included in another option

PUMA TT 2000/2500

<http://domss.doosaninfracore.com>

Sales & Support Network

ARGENTINA/Rosario AUSTRALIA/Melbourne/Sydney AUSTRIA/Vienna BELGIUM/Gullegem BRAZIL/Sao paulo BULGARIA/Sofia CANADA/Edmonton/Montreal/Toronto/Vancouver CHILE/Santiago CHINA/Beijing/Chongqing/Guangzhou/Shanghai/Shenyang COLOMBIA/Bogota CZECH/Brno DENMARK/Randers EGYPT/Cairo FINLAND/Tampere FRANCE/Annecy GERMANY/Dusseldorf GREECE/Athens HONG KONG/Kowloon HUNGARY/Budapest INDIA/Bangalore/Pune INDONESIA/Jakarta ISRAEL/Herzlia ITALY/Parma MALAYSIA/Puchong MEXICO/Guadalajara /Mexico City /Monterrey /Vera Cruz NETHERLANDS/Goorn NEW ZEALAND/Auckland NORWAY/Oslo PAKISTAN /Islamabad POLAND/Krakow PORTUGAL/Lisbon ROMANIA/Bucharest RUSSIA/Moscow SINGAPORE/Singapore SLOVENIA/Ljubljana SOUTH AFRICA/Kempton Park SPAIN/Barcelona SWEDEN/Stockholm SWITZERLAND/Zurich TURKEY/Istanbul THAILAND/Bangkok U.A.E/Sharjah U. K./Leamington U.S.A./Atlanta/Birmingham /Charlotte/Chicago/Cincinnati/Cleveland/Dallas/Denver/Detroit/Houston/Indianapolis/Kansas City/Little Rock/Los Angeles/Milwaukee/Minneapolis/New Jersey/New Orleans/Norfolk /Philadelphia/Phoenix/Pittsburgh/Portland/Rochester/Salt Lake City/San Diego/San Francisco/Seattle/Springfield/St. Louis/Tampa/Tulsa VENEZUELA/Valencia VIETNAM/Hanoi



Doosan Infracore
Machine Tools

Head Office : Doosan Tower 22nd FL., 18-12, Euljiro-6Ga, Jung-Gu, Seoul, Korea 100-730
Tel : ++82-2-3398-8651 Fax : ++82-2-3398-8699
E-mail : master@domss.com

Doosan Infracore America Corp.: 8 York Avenue, West Caldwell, NJ 07006, U.S.A.
Tel : ++1-973-618-2500 Fax : ++1-973-618-2501

Doosan Infracore Germany GmbH : Hans-Böckler-Strasse 29, D-40764 Langenfeld-Fuhrkamp, Germany.
Tel : ++49-2173-8509-10 Fax : ++49-2173-8509-60

China Representative Office : 9-101 Xinmao Building, 99 Tianzhou Road, Caohejing Hi-Tech Development
Shanghai, China 200233 Tel : ++86-21-5445-1155 (812,815) Fax : ++86-21-64403389